

IN THE CLAIMS:

The text of all pending claims, (including withdrawn claims) is set forth below. Cancelled and not entered claims are indicated with claim number and status only. The claims as listed below show added text with underlining and deleted text with ~~striketthrough~~. The status of each claim is indicated with one of (original), (currently amended), (cancelled), (withdrawn), (new), (previously presented), or (not entered).

1. (PREVIOUSLY PRESENTED) A hinge apparatus to open and close a cover of an image forming apparatus, which pivotably connects the cover to a main body of the image forming apparatus, to expose and cover a document glass, the hinge apparatus comprising:

a hinge body movably inserted in a first direction into a coupling hole positioned in the main body of the image forming apparatus, and having supporting brackets;

a hinge cam, connected to the cover, and pivotably connected to the supporting brackets;
and

a pressure device disposed at the hinge body to press the hinge cam;

the hinge body is provided with a housing chamber; and

the pressure device comprises

a pusher disposed in the housing chamber, that protrudes from the housing chamber, and

a spring disposed within the housing chamber to press the pusher;

the pusher comprises a locking protrusion;

the hinge body is provided with a guide slot; and

the locking protrusion is inserted into the guide slot, and prevents the release of the pusher from the hinge body;

wherein the pusher moves upward and downward within the guide slot.

2. (CANCELLED)

3 (ORIGINAL) The hinge apparatus of claim 1, wherein the hinge cam comprises:

a body portion connected to the cover; and

a cam part that pivots in close contact with the pressure device.

4. (ORIGINAL) The hinge apparatus of claim 3, wherein:
the cam part and each of the supporting brackets are provided with a shaft hole,
respectively, and
the hinge apparatus further comprises a hinge shaft inserted through the respective shaft
holes, to pivotably connect the cam part to the supporting brackets.
5. (ORIGINAL) The hinge apparatus of claim 4, wherein:
a center of the hinge shaft is located toward the document glass compared to a pressure
central line of the pressure device.
6. (CANCELLED)
7. (ORIGINAL) The hinge apparatus of claim 1, wherein the hinge body comprises:
a first protrusion positioned at one side of the hinge body, to prevent the supporting
brackets from entering the coupling hole.
8. (ORIGINAL) The hinge apparatus of claim 1, wherein:
the main body comprises a hooking portion positioned at one side of the main body of an
image forming apparatus; and
the hinge body comprises a second protrusion positioned at a first side of the hinge body,
that is caught by the hooking portion, thereby preventing the release of the hinge body from the
coupling hole when the hinge body is moved in a direction opposite the first direction.
9. (PREVIOUSLY PRESENTED) The hinge apparatus of claim 1, wherein:
the pusher is made of a lubricating resin.
10. (ORIGINAL) The hinge apparatus of claim 1, wherein:
the hinge cam is made of a lubricating resin.
11. (PREVIOUSLY PRESENTED) A hinge apparatus rotatably connecting a cover
and a main body, the hinge apparatus comprising:
a hinge body, with a void therein and a supporting bracket, movable in an opening in the
main body;
a pressure device, movable within the void, and biased toward a first end of the hinge

body; and

a hinge cam, connected to the cover, rotatably connected to the supporting bracket, and slidably engaging the pressure device;

wherein the hinge body comprises a first protrusion, to limit an amount the hinge body moves into the opening in the main body.

12. (ORIGINAL) The hinge apparatus according to claim 11, wherein:

the hinge cam and the supporting bracket each have a shaft hole; and

the hinge apparatus further comprises a hinge shaft inserted through the shaft holes of the hinge cam and the supporting bracket, to rotatably connect the hinge cam and the supporting bracket.

13. (ORIGINAL) The hinge apparatus according to claim 12, wherein:

the hinge shaft is provided with at least one groove portion; and

the hinge apparatus further comprises at least one coupling ring, fixed to the at least one groove portion, to maintain a position of the hinge shaft with respect to the shaft holes of the hinge cam and the supporting bracket.

14. (PREVIOUSLY PRESENTED) A hinge apparatus rotatably connecting a cover and a main body, the hinge apparatus comprising:

a hinge body, with a void therein and a supporting bracket, movable in an opening in the main body;

a pressure device, movable within the void, and biased toward a first end of the hinge body, wherein the pressure device comprises a pusher; and

a hinge cam, connected to the cover, rotatably connected to the supporting bracket, and slidably engaging the pressure device, wherein:

a first protrusion and a second protrusion are provided on the hinge cam; and

a first receiving part and a second receiving part, receiving the first and second protrusions respectively, are provided on the supporting bracket to rotatably connect the hinge cam and the supporting bracket.

15. (CANCELLED)

16. (PREVIOUSLY PRESENTED) The hinge apparatus according to claim 11, wherein:

the opening in the main body is provided with a hooking portion; and

the hinge body comprises a second protrusion, to limit an amount the hinge body moves out of the opening in the main body.

17. (ORIGINAL) The hinge apparatus according to claim 11, wherein:

the pressure device comprises a pusher and a biasing element that biases the pusher toward the first end of the hinge body; and

the hinge body comprises a biasing element support,

wherein a first end of the biasing element engages a first end of the pusher, and a second end of the biasing element engages the biasing element support.

18. (ORIGINAL) The hinge apparatus according to claim 17, wherein

the pusher comprises a locking protrusion; and

the hinge body comprises a wall with a guide slot,

wherein the locking protrusion is inserted into the guide slot, to guide and limit movement of the pusher within the void of the hinge body.

19. (ORIGINAL) The hinge apparatus according to claim 18, wherein:

a location of the guide slot is defined to prevent the pusher from being released from the hinge body.

20. (ORIGINAL) The hinge apparatus according to claim 18, wherein:

the biasing element comprises a spring; and

a length of the spring is defined as approximately a distance between the first end of the pusher and the spring support, when the locking protrusion of the pusher contacts a side of the slot nearest the first end of the hinge body.

21. (ORIGINAL) The hinge apparatus according to claim 17, wherein:

at least one of the pusher and the hinge cam are made of a lubricating resin.

22. (ORIGINAL) The hinge apparatus according to claim 11, wherein the hinge cam comprises:

a body portion connected to the cover; and
a cam part slidably engaging the pressure device.

23. (ORIGINAL) The hinge apparatus according to claim 22, wherein:
the body portion and the cam part are integrally formed.

24. (PREVIOUSLY PRESENTED) The hinge apparatus according to claim 12,
wherein:
a center of rotation of the hinge shaft is offset by a predetermined distance from a line
along which a center of the pressure device moves so that rotation of the hinge cam is inhibited
when the pressure device moves.

25. (ORIGINAL) An apparatus having a cover and a main body connected by the
hinge apparatus of claim 11.

26. (CANCELLED)

27. (PREVIOUSLY PRESENTED) A hinge apparatus to open and close a cover of an
image forming apparatus, which pivotably connects the cover to a main body of the image
forming apparatus, the hinge apparatus comprising:

a hinge body comprising a housing chamber and supporting brackets;
a hinge cam pivotably connected to the supporting brackets; and
a pressure device disposed at the hinge body to press the hinge cam, said pressure
device comprising:
a pusher comprising a guide member, disposed in the housing chamber; and
a spring disposed in the housing chamber to press the pusher, wherein the hinge
body is provided with a receiving member corresponding to the guide member to guide a
movement of the pusher.

28. (PREVIOUSLY PRESENTED) The hinge apparatus according to claim 27,
wherein the guide member is a protrusion formed on the pusher.

29. (PREVIOUSLY PRESENTED) The hinge apparatus according to claim 28,
wherein the receiving member is a guide slot, and the protrusion is a locking protrusion inserted

into the guide slot to limit the movement of the pusher.

30. (PREVIOUSLY PRESENTED) The hinge apparatus according to claim 27, wherein one of the hinge body and the hinge cam is movably inserted in a coupling hole positioned in the main body of the image forming apparatus.

31. (PREVIOUSLY PRESENTED) The hinge apparatus according to claim 30, wherein the other one of the hinge body and the hinge cam is connected to the cover.

32. (PREVIOUSLY PRESENTED) The hinge apparatus according to claim 30, wherein the one of the hinge body and the hinge cam comprises a first protrusion which restricts the inserting range of the one of the hinge body and the hinge cam into the coupling hole.

33. (PREVIOUSLY PRESENTED) The hinge apparatus according to claim 30, wherein the one of the hinge body and the hinge cam comprises a second protrusion which prevents the release of the one of the hinge body and the hinge cam from the coupling hole.

34. (PREVIOUSLY PRESENTED) A hinge apparatus rotatably connecting a cover and a main body, the hinge apparatus comprising:

a hinge body, with a void therein and a supporting bracket;

a pressure device, movable in the void, and biased toward a first end of the hinge body;

and

a hinge cam rotatably connected to the supporting bracket, and slidably engaging the pressure device;

wherein one of the hinge body and the hinge cam comprises a first protrusion, to limit an amount the one of the hinge body and the hinge cam moves into an opening in the main body.

35. (PREVIOUSLY PRESENTED) The hinge apparatus according to claim 34, wherein the other one of the hinge body and the hinge cam is connected to the cover.

36. (PREVIOUSLY PRESENTED) The hinge apparatus according to claim 35, wherein the one of the hinge body and the hinge cam further comprises a second protrusion, to limit an amount the one of the hinge body and the hinge cam moves out of the opening in the main body.

37. (PREVIOUSLY PRESENTED) The hinge apparatus according to claim 34, wherein the pressure device comprises:
a pusher comprising a guide member; and
a biasing element which biases the pusher toward the first end of the hinge body, wherein the hinge body is provided with a receiving member corresponding to the guide member to guide a movement of the pusher in the void.

38. (PREVIOUSLY PRESENTED) An image forming apparatus having a cover and a main body connected by the hinge apparatus of claim 27.

39. (PREVIOUSLY PRESENTED) An image forming apparatus having a cover and a main body connected by the hinge apparatus of claim 34.